

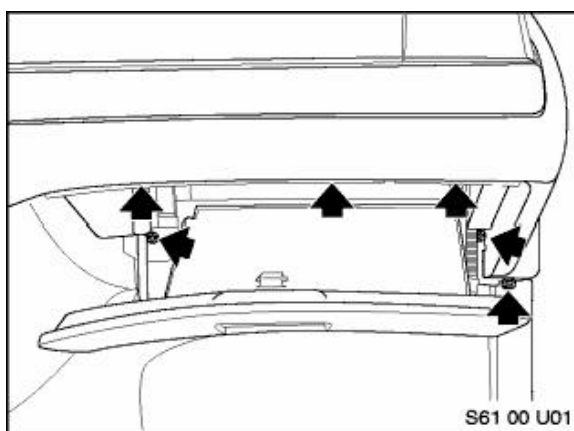
SUBJECT Troubleshooting Erratic Instrument Cluster Functions

MODEL E46 (3 Series)

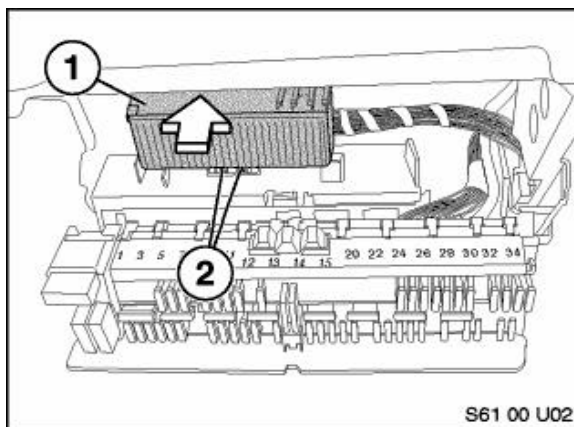
SITUATION A low voltage condition on the K-bus can cause erratic operation of instrument cluster functions. Additional faults may be present as follows: K-bus FC 87 set in instrument cluster and radio disabled.

CAUSE Low voltage on K-bus

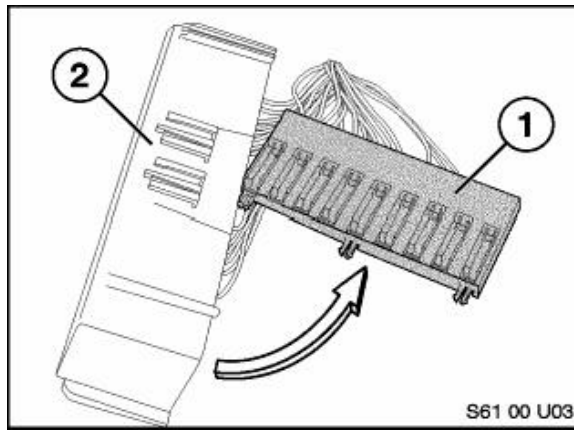
PROCEDURE 1. 1. Disconnect the battery



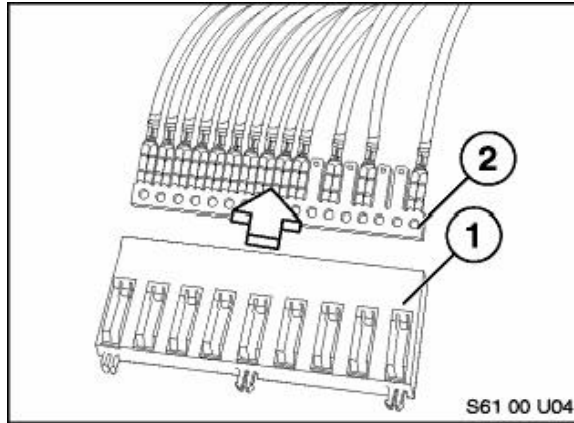
2. Remove the (6) screws holding the glove box and remove the glove box



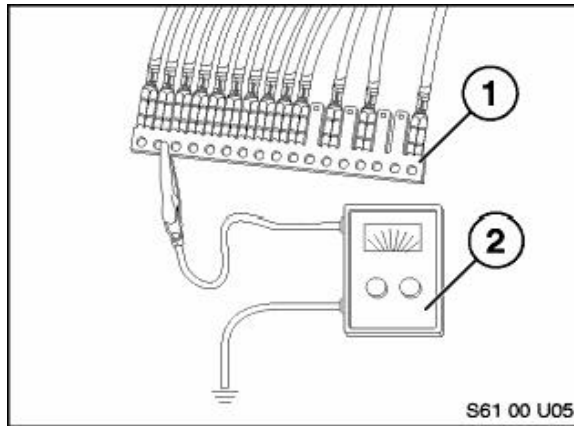
3. Drop down the fuse box to expose the splice box (1) mounted above it. Release the splice box by squeezing the locking tabs (2) towards each other and sliding off towards the front of the vehicle.



4. Locate the K-bus splice assembly (1) (wires colored White/Red/Yellow) and remove it from the splice box (2).

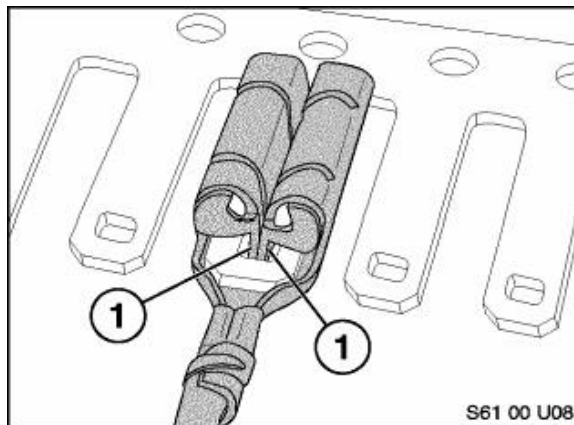


5. Remove the plastic cover (1) from the splice (2).

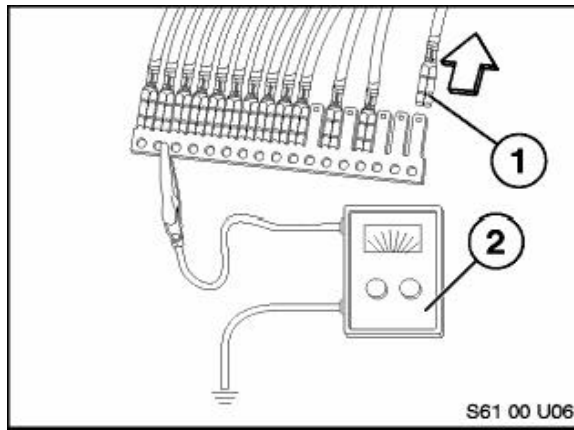


6. Reconnect the battery, switch on the ignition, and confirm the low voltage at the splice (1) using a multimeter (2).

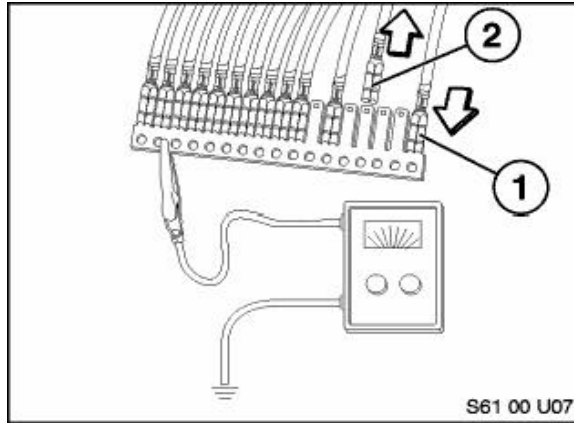
Note that with a fully charged battery, the K-bus voltage should be greater than 11.0 volts



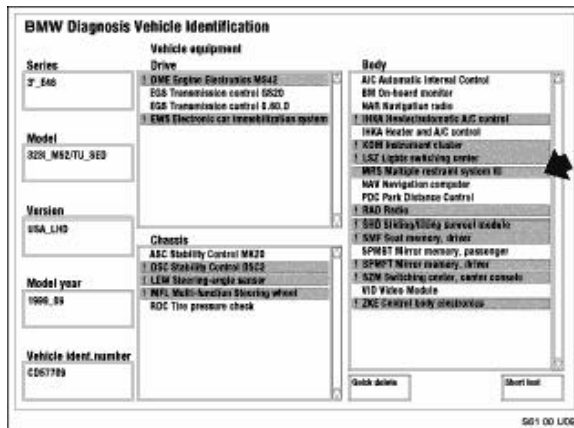
7. To remove a connector from the splice, use a small screwdriver to raise the two locking tabs (1) before sliding the connector off.



8. Starting at one end of the splice, remove the splice connector (1) and note the effect on the voltage at the multimeter (2).



9. If the measured voltage is unchanged, reconnect the splice connector (1), and remove the next connector in line (2). Continue this procedure removing and reconnecting each connector in turn until the connector is identified where the measured voltage returns to >11.0 volts with the connector removed. This identifies the connector with the problem circuit



10. To identify the problem circuit, using DIS or MoDiC, run a Short Test with the problem connector still removed at the K-bus splice. Because the test is run without the problem wire connected, it cannot be identified, and will show as a blank () instead of either (!) or (x) - see example.

11. Continue diagnosis of the problem circuit identified in step 10, to locate and correct the root cause of the low voltage.
12. Reinstall the splice components and glove box in reverse order.
13. Recheck operation of the instrument cluster functions to confirm satisfactory operation.

WARRANTY INFORMATION

For information only